# PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

Beetz, Tom
DE VRIES & METMAN
Overschiestraat 180
NL-1062 XK Amsterdam
PAYS-BAS

PCT

WRITTEN OPINION
(PCT Rule 66)

10. 5

| | |
|---|---|
| Date of mailing *(day/month/year)* | 10.02.2004 |
| Applicant's or agent's file reference W5424-Beld TS0777/PCT | REPLY DUE within 3 month(s) from the above date of mailing |
| International application No. PCT/EP 03/03173 | International filing date *(day/month/year)* 24.03.2003 |
| Priority date *(day/month/year)* 28.03.2002 | |
| International Patent Classification (IPC) or both national classification and IPC C08L95/00 | |
| Applicant KRATON POLYMERS RESEARCH B.V. et al | |

1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

| | | |
|---|---|---|
| I | ☒ | Basis of the opinion |
| II | ☐ | Priority |
| III | ☐ | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| IV | ☐ | Lack of unity of invention |
| V | ☒ | Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| VI | ☐ | Certain documents cited |
| VII | ☐ | Certain defects in the international application |
| VIII | ☐ | Certain observations on the international application |

3. The applicant is hereby **invited to reply** to this opinion.

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also:** For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
For an informal communication with the examiner, see Rule 66.6.

**If no reply is filed,** the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 28.07.2004

Name and mailing address of the international preliminary examining authority:

European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
Fax: +49 89 2399 - 4465

Authorized Officer
Otegui Rebollo, J

Formalities officer (incl. extension of time limits)
Walli, K
Telephone No. +49 89 2399-8060

## WRITTEN OPINION

International application No. PCT/EP 03/03173

### I. Basis of the opinion

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed")*:

**Description, Pages**

1-23 as originally filed

**Claims, Numbers**

1-11 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

6. Additional observations, if necessary:

### V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

## WRITTEN OPINION

International application No. PCT/EP 03/03173

| | | |
|---|---|---|
| Novelty (N) | Claims | |
| Inventive step (IS) | Claims | 1-11 (No) |
| Industrial applicability (IA) | Claims | |

2. Citations and explanations

**see separate sheet**

**WRITTEN OPINION**
**SEPARATE SHEET**

International application No. PCT/EP03/03173

Re Item V

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

The following documents (D) are referred to in this communication; the numbering will be adhered to in the rest of the procedure:

D1 = EP-A- 1 097 969
D2 = US-A- 4 874 821
D3 = WO-A- 02/00806

1. The subject-matter of claims 1 to 8, 10 and 11 does not appear to involve an inventive step (Article 33(3) PCT) over the teachings of D1 (bituminous mixtures comprising an $(A\text{-}B)_2$ copolymer, wherein A= polystyrene and B=polyisoprene) and D2 ($B_1\text{-}A_1\text{-}B_2\text{-}A_2$ copolymers with molecular weights of 250,000 and $B_2/B_1 = 10$) as it constitutes a mere selection within the wider disclosure of said documents without the provision of any surprising or unexpected effect because in the comparative tests no tetrablock polymer according to D1 or D2 was considered. The subject-matter of claim 9 does not appear to involve an inventive step over the teachings of D2 (see above) as it apparently concerns a routine selection within the wider disclosure of D2.

2. Concerning molecular weights of the block copolymers of the invention, applicants' attention is drawn to the fact that apparently different methods are currently used (see, for instance, page 7, lines 9 to 13, of the application, and D3, page 8, lines 23 to 29). It is not clear if these different methods provide different results. Applicants must comment of this issue.

3. In case of filing amended substitute sheets, and in order to facilitate the examination of the conformity of the amended application with the requirements of Article 34(2)(b) PCT, the applicant is requested to clearly identify the amendments carried out, irrespective of whether they concern amendments by addition, replacement or deletion, and to indicate the passages of the application as filed on which these amendments are based. If the applicant regards it as appropriate these indications could be submitted in handwritten form on a copy of the relevant parts of the application as filed.

10/508 908
DT15 Rec'd PCT/PTO 23 SEP 2004

KRATON Polymers™

**KRATON Polymers Research**

KRATON Polymers Research B.V.
Intellectual Property Services
PO Box 37666
1030 BH Amsterdam
The Netherlands
Tel +31 (0)20 630 2197
Fax +31 (0)20 630 3910
Email
marcel.kortekaas@kraton.com
Internet http://www.kraton.com

International Preliminary Examination Authority
European Patent Office

D-80298 München
Germany

14 May 2004

Your ref:
Our ref: TS0777/PCT (previously W5424-Be/td)

**International application No. PCT/EP03/03173**
**KRATON Polymers Research B.V.**

Dear Sir or Madam

We refer to the Written Opinion pursuant to PCT Rule 66 dated February 10, 2004 and received on February 16, 2004. We attach our comments.

Please note that the prosecution of the international application is now handled by ourselves and no longer by Mr. Tom Beetz of De Vries & Metman. We kindly request you to correspond to our Amsterdam office mentioned above and to use the new case reference number.

The Examiner has acknowledged novelty in respect of the claimed subject-matter. The discussion therefore is whether the present invention is inventive.

The present invention concerns bituminous compositions having advantageous high and low temperature properties. These properties are important with regard to the intended use, in roofing applications. In the description of the specification an extensive discussion may be found on the prior art on bituminous compositions used for roofing applications. The problem with regard to prior art bituminous compositions is that they do not provide compositions for use as self-adhesive roofing membranes, without risk of fire and hazard to the installation workers. It is this problem that the inventors set out to solve.

D1 (EP1097969A) is about a modifier to improve the performance of bituminous mixtures used in the road paving. This application does not mention its use in roofing applications, nor does it suggest to present a formulation that can be used in roofing applications. For the purpose of assessing inventive step, this reference is less relevant than the prior art already discussed in the background part of the present specification.

May 14, 2004

European Patent Office
Munich

D2 (4874821) concerns block copolymers having a butadiene-tapered styrene endblock (produced in the first reaction step). These polymers are said to be endowed with a desired balance of mechanical characteristics, rheologic characteristics and characteristics of resistance to thermooxidation. The polymers are tested as hot melt adhesive. Such adhesives find for instance use in the bookbinding and similar application. Aside from the fact that the process described in D2 does not result in a polymer having four alternating blocks, it has absolutely nothing to do with bituminous compositions.

WO02/00787 (D3) is the third reference mentioned in the written opinion. It is mentioned with respect to the discussion on molecular weights. In D3 the molecular weight is determined by GPC. Using commercially-available polystyrene calibration standards the molecular weight as determined is crocrected, resulting in an apparent molecular weight. This method has become a standard and is published as ASTM D3536-76 (or ASTM 3536 for short). In other words, there is no difference in the method applied.

Having addressed all the objections in the written opinion, we look forward to a favorable report. If further explanation or clarification is necessary, Applicants would welcome a further opportunity to respond.

Yours faithfully
KRATON Polymers Research B.V.

M C J A Kortekaas (GA 43691)